of the other, and in many instances with much more than twice. How rare is this occurrence may be judged from the fact that there is no case in the 140 years' table just referred to. The nearest approaches are—Chatsworth, in 1788, 19·86 inches, in 1789, 36·31, the former being 55 per cent. of the latter. A still nearer approach occurred at Cobham, in Surrey, in 1851 and 1852, when the totals were 17·38 and 34·19 inches respectively, the former being 51 per cent. of the latter. In Table II. no cases are admitted unless much more striking than the above. The districts in which these exceptional ratios occur are (as might be expected) principally those in which the excess in 1872 was greatest, but there are also a few of which the explanation is not so obvious. It is very satisfactory to feel that these two exceptional years have found in the British Isles the most nearly perfect system of observation in the world.

Your committee cannot close their report without expressing as far as words can do so the loss which they have sustained in the death of Prof. Phillips, one of the original members appointed in 1865, who, notwithstanding the numerous other demands upon his time, was always as willing as he was able to assist the committee in any of the various difficulties which the extent of their operations inevitably involve.

Preliminary Report on Dredging on the Coast of Durham and North Yorkshire.

The dredging off the coasts of Durham and North Yorkshire, provided for by a grant from the British Association last year, was carried out during the week beginning on the 13th July. A suitable vessel was engaged, and being on the whole favoured by the weather, we dredged every day until the 18th inclusive. During two days the R.A. M. Marman accompanied us. We were indebted to him for valuable assistance in naming some of our specimens, as well as for kindly undertaking to report on some sections of the work.

On two days out of the six the sea was too rough to allow of the dredges being worked very successfully, and one dredge was unfortunately lost by getting fast on hard ground while a very strong tide was running, but with these exceptions the work was carried out satisfactorily. The dredging ranged from near Tynemouth, on the north, to Scarborough, on the south, the water varying in depth from 20 to 45 fathoms, the greater portion of the time being devoted to a belt known to fishermen as the "inner fishing bank," lying from four to eight miles from the shore. One day, however, was spent at the greater distance of thirty to forty miles from shore, and another day at a distance of about seventeen miles.

Time has not allowed of anything more than safely to preserve and arrange our captures. On a future occasion we hope to give a full account of the results obtained.

NOTES

THE final programme of the Oriental Congress, to be held in London next month, was settled on Tuesday; we hope to be able to say something about it next week.

M. ALLUARD, director of the Meteorological Observatory which is being erected on the Puy-de-Dôme, regrets that, owing to the backward state of the works, the building cannot be opened in the end of September, as was expected. It is hoped, however, that the work of the Observatory will be commenced before winter. The construction of the telegraphic line which will connect the station on the plain at Clermont with the station on the summit of the Puy-de-Dôme has been completed. The formal inauguration will take place next summer. One main cause of the delay is owing to the fabulous prices demanded by the small proprietors through whose lands the approaches to the Observatory must be made; no blame whatever for the delay can be attached to the staff of the Observatory. The Government authorities, central and local, have shown the greatest zeal in forwarding the construction of the works.

THE Emperor of Austria has conferred the decoration of Knight of the Order of the Iron Crown, with a patent of hereditary nobility, on Dr. Julius von Haast, director of the Museum of Canterbury, New Zealand, in recognition of his eminent scientific merits and attainments.

SIR WILLIAM FAIRBAIRN, Bart., F.R.S., died on the 18th inst., in his eighty-fifth year, having been born at Kelso, in Scotland, in 1789. What Sir William has done to improve the manufacture of iron is well known. He was one of the founders of the British Association, and was its president in 1861. Many papers by Sir William appeared in the Philosophical Transactions, in the Reports of the British Association, and in the Transactions of the Philosophical Society of Manchester. Some of his works, however, were also published separately. Among his chief productions may be specified treatises on "Canal Navigation," on "The Strength and other Properties of Hot and Cold Blast Iron," on "The Strength of Locomotive Boilers," on "The Strength of Iron at Different Temperatures," on "The Effect of Repeated Melting upon the Strength of Cast Iron," on "The Irons of Great Britain," on "The Strength of Iron Plates and Riveted Joints," on "The Application of Iron to Building Purposes in General," on "Useful Information for Engineers," &c.

IT is stated that the Crown has appointed Mr. John Ferguson, M.A., to the chair of Chemistry in Glasgow University, vacant by the retirement of Dr. Thomas Anderson.

THE subscriptions announced up to Saturday last on behalf of the University of Edinburgh Buildings Extension Scheme amount to 69,017*l*. The total sum required from the public is 100,000*l*.

THE Council of the Ray Society, in presenting their Thirty-first Annual Report, congratulate the members on the continued prosperity of the Society. The arrears in the issue of the annual volumes, long a cause of much inconvenience, have been at length overcome. Since the last meeting, at Bradford, two volumes, those for the years 1872 and 1873, have been distributed; a third volume, that for the year 1874, is finished, and will be issued in October. The volumes for the years 1872 and 1873, consisting of the first part of the British Annelids, by Dr. McIntosh, although containing less text and fewer illustrations than in some of the previous memoirs, have been in the matter of production equally costly. The very beautiful plates, printed in colours by lithography, required many stones for their proper development, and necessitated a corresponding outlay. The volume for the present year, on the Spongiadæ, by Dr. Bowerbank, completing the series on that subject, and, illustrated by ninety-two plates, is also a most excellent example of work both on the part of the artist and the lithographer. As the cost of this volume has been in excess of the yearly income, it is hoped that a considerable addition of subscribers will justify the money expended. The proposition alluded to in the last Report, viz., that of reducing the price of certain of the earlier works of the Society, has been much appreciated by the members, and has proved a financial success. It has been suggested that the machinery of the Society might be more largely employed in the production of Monographs on the Fauna and Flora of Great Britain; the Council therefore solicit assistance from authors who possess the requisite knowledge and who may be willing to assist in the undertaking. In conclusion, the Council, in order to obtain funds sufficient to carry out the objects of the Society, urge upon members the necessity of gaining new subscribers.

IN an address recently delivered before the Dublin Obstetrical Society, Dr. Evory Kennedy discussed the development and spread of scrofula from an evolutionary point of view. This is an aspect of hereditary disease which admits of much extension; one which requires a much larger accumulation of statistics than we yet possess, and a far deeper insight into the physiological basis of pathology than we can expect for some time to come. There is one argument brought forward by Dr. Kennedy that deserves especial attention, which is, that as scrofula tends to early death, or the production of a few early dying offspring, the fact that it is not diminishing in its ravages proves

that it is being continually developed *de novo* by surrounding circumstances. Is this not a sufficient stimulus for increased sanitary legislation?

THE Governor of Minnesota has called on the general Government for aid, as, owing to the ravages of grasshoppers for two years past, many thousands are suffering for want of food. The American naturalists suggest that the grasshopper should be eaten, just as it is in portions of Africa and Western Asia.

The new Minister of Public Instruction visited the Observatory of Paris last week, and expressed his satisfaction to M. Leverrier with what he had seen and with the explanations which had been given to him.

THE ownership of the grounds between the old Paris Observatory Gardens and the Boulevard Arago, more than two acres, has been disputed between the Government and the city of Paris. The right of the city was acknowledged, but the Municipal Council have let it to the Observatory for the nominal rent of 20 francs a year. On these grounds a magnetic service is to be established.

TWO interesting balloon ascents have taken place in America lately, one at New York by Prof. Donaldson, with his large Transatlantic balloon, and a batch of reporters from several influential papers at New York. The trip, including four landings, lasted more than twenty-four hours, and ended in the vicinity of Saratoga, the balloon having run a distance of about eighty miles. A few days afterwards Prof. Wyse executed an ascent in Canada, in order to ascertain if a western current blows in the upper parts of the atmosphere when the lower stream of air is running in another direction. At a moderate height the western current was met with. Prof. Donaldson contends that it is a consequence of the revolution of the earth, and can be trusted to for crossing the Atlantic from America to Europe. But can these partial experiments be really relied upon? That remains to be demonstrated.

ONE of the very few scientific members of the Versailles Assembly has departed. M. Fland, an engineer, died at Dinan, where he was appointed Mayor seventeen years ago. He had an engine manufactory at Brest, and was appointed by contract the constructor of the celebrated Giffard injector. M. Fland was originally a pupil of the Ecole des Arts et Métiers d'Angers.

MR. THOMAS MUIR, M.A., F.R.S.E., Assistant Professor of Mathematics in the University of Glasgow, and author of some original investigations in Mathematics, has been appointed successor to Dr. Bryce in the Mathematical Mastership of the High School of Glasgow.

MR. CHARLES MOORE, the *Garden* states, who recently brought a good many valuable and very novel plants to this country from the South Sea Islands and Australia, returns to Sydney by the next mail, having visited many of the best botanic gardens and nurseries in Europe, and selected an immense collection of valuable and rare plants for the Sydney Botanic Garden, which is said to be one of the most beautiful in the world.

WE learn from *Iron* that the Academy of Sciences of Berlin offers a prize of 200 dols., payable in July 1876, for the best essay recording experiments as to whether changes in the hardness and friability of steel are due to chemical or physical causes, or to both. Papers in German, Latin, English, or French, are to be sent in before March 1876.

THE Report of the Council of the Leicester Literary and Philosophical Society, presented at the annual meeting of June 15 last, is on the whole very gratifying. The Society contains a large number of members, and is working in the right direction in trying to interest not only the members, but the inhabitants of Leicester generally, in science as well as literature. During last winter a very judiciously planned course of lectures was delivered in connection with the Society, which was fairly attended, and would, we believe, have been still better attended, had there been no free seats. The Society is divided into sections, three of which are scientific—(1) Meteorology and General Physics, (2) Geology and Palæontology, (3) Natural History. Satisfactory reports are given in Nos. 1 and 3, the latter having set itself to the collection of statistics of the natural history of the county, and the former, among other things, to a regular series of meteorological observations. We hope the Leicester Society will persevere in its work.

WE have received as No. 1 of the "Proceedings of the Chester Society of Natural Science," a very excellent list (with remarks) of birds observed in Werral, Cheshire, by J. F. Brockholes. The list contains 168 species.

THE Seventh Annual Report of the Trustees of the Peabody Museum of American Archæology and Ethnology (Harvard) contains some account of the valuable series of objects connected with South American and Pacific archæology and ethnology, which the late Prof. Agassiz acquired during his voyage in the *Hassler* in 1871-2, and which have been transferred to the Peabody Museum. The collection is very valuable and comprehensive; there are 330 specimens of Peruvian skulls alone. The Report contains a very ingenious paper, apparently by Mr. J. Wyman, the Curator, On the human remains in the shell heaps of the St. John's River, East Florida, in which the author argues, from the condition of the bones and other circumstances, that the Floridan aborigines were in all probability cannibals.

ONE of the many valuable results of the work of the U.S. Geological Survey of the Territories, is a "Synopsis of the Flora of Colorado," by T. C. Porter and J. M. Coulter. This work is intended to be a type of a series of handbooks of different branches of natural history, to be published from time to time as a part of a series of "Miscellaneous Publications" for the use of students. No. 3 of the series is nearly ready, and has been prepared by the eminent ornithologist, Dr. E. Coues. It will form an octavo volume of several hundred pages, bringing the whole subject of western ornithology up to date.

A PAPER by Dr. H. D. Schmidt, of New Orleans, U.S.A., On the construction of the dark or double-bordered nerve-fibre, occupies a large part of the last number of the *Microscopic Journal*, and is illustrated by three plates. In the same number is the first instalment of a communication by Rev. S. J. Brakey on the theory of immersion.

THE additions to the Zoological Society's Gardens during the past week include two Chukar Partridges (*Cacabis chukar*) from N. W. India, presented by the Hon. Justice Jackson; four Sandwich Terns (*Sterna cantiaca*), four Avocets (*Recurvirostra avocetta*), European, purchased; a Common Crowned Pigeon (*Goura coronata*), two Bronze-winged Pigeons (*Phaps chalcoptera*), hatched in the Gardens; a Black-eared Marmoset (*Hapale penicillata*) from Brazil; and two Suricates (*Suricata zenik*) from South America, deposited.

FRENCH ASSOCIATION FOR THE PROGRESS OF SCIENCE

THE Lille Session was opened on Aug. 20 by the address of M. Wurtz, of which you have received a copy, and which has been published in all the French papers. The *Débats*, by an extraordinary access of zeal, published it a day before it was delivered!

On Friday Colonel Laussedat read at a general session a report on the results of the last session.